

Molecular Formula

- represents the \_\_\_\_\_ number of \_\_\_\_\_ of each \_\_\_\_\_ in the \_\_\_\_\_
- not necessary for \_\_\_\_\_
- necessary for \_\_\_\_\_

The molecular formula for water is \_\_\_\_\_, and empirical formula is also \_\_\_\_\_.

The molecular formula for hydrogen peroxide is \_\_\_\_\_, and empirical formula is \_\_\_\_\_.

Example Problem

The empirical formula for glucose is  $\text{CH}_2\text{O}$ .

a) If the molar mass is 180.0 g/mole, find the molecular formula.

b) If the molar mass is \_\_\_\_\_ g/mole, find the molecular formula.

Problem Set One (work on your own paper)

empirical formula	molar mass
CH	_____ g/mol
$\text{NO}_2$	_____ g/mol
$\text{C}_3\text{H}_8$	_____ g/mol

Ex. Problem: Find the molecular formula for a compound with-  
\_\_\_\_\_ g N    \_\_\_\_\_ g O    molar mass \_\_\_\_\_ g/mol

### Hydrates

- \_\_\_\_\_ with \_\_\_\_\_ molecules adhering to the  
\_\_\_\_\_ or \_\_\_\_\_
- $\text{Na}_2\text{CO}_3 \cdot \text{_____H}_2\text{O}$   
indicates \_\_\_\_\_ molecules adhering to each  
\_\_\_\_\_ of sodium carbonate
- mass of \_\_\_\_\_ = mass of \_\_\_\_\_ compound minus mass  
of \_\_\_\_\_ compound

### Example Problems

Determine the formula of hydrated barium chloride from this data:

initial mass of hydrated compound = 1.373g

mass after heating = 1.175g

Determine the formula for the hydrate that is \_\_\_\_\_ %  $\text{CaSO}_3$   
and \_\_\_\_\_ %  $\text{H}_2\text{O}$ . (*work on back*)

### **The Chemistry Quiz**

CR1.

CR2.

1.

2.

3.

4.

5.